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REPORT OF THE ROYAL ONTARIO MUSEUM

OF ZOOLOGY

October 1st, 1945 - September 30th, 1946.

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The research and educational work of the Museum of Zoology has continued on the same basis as previously. The demands for information and service outlined in previous reports has continued to increase. Since the work of the Provincial Department of Game and Fisheries has been transferred to the Department of Lands and Forests, the demand for service in connection with the administration of the fisheries and wildlife of the Province has become much greater.

Instead of being able to meet these increasing demands, our ability to do so has seriously declined during the year. Three members of the staff have resigned and it has been possible to replace only one of these because the salaries paid to those who have left were not sufficient to attract qualified persons to replace them.

Because increased routine demands for service must be met by a smaller staff, much research and educational work has had to be discontinued. The preparation and installation of gallery exhibits has ceased, partly because of the resignation of our taxidermist and partly because other members of the staff are occupied in meeting routine obligations.

Appropriations for publication, specimens, field work, cases and all non-salary purposes is this year less than half what it was during the year 1938-39. In addition to funds from the Government and University referred to in this statement, we formerly had money from the Reuben Wells Leonard Fund for field work and publication.

A contribution from the Carling Conservation Club enabled the Museum to undertake studies on the moose and the maskinonge.

It is proposed to spend some of the salary of the two resigned members of the staff in publication, purchase of specimens, construction of cases, etc., but this is a case of robbing Peter to pay Paul. No matter how we juggle our funds, they are totally inadequate to maintain the staff and carry out the education and research for which the demand is every year more and more insistent.

ROUTINE DEMANDS FOR SERVICE

To illustrate the type of service for which the Museum is asked from day to day, the following are cited merely as examples. The list is in no sense exhaustive.

IDENTIFICATION of specimens of mammals, birds, reptiles, fish, insects, spiders, molluscs, etc., sent by research workers, naturalists, and ordinary citizens is a constant and proper Museum function.

Examples: A student employed by Department of Planning and Development on river valley surveys sought identification of stream fishes collected.

A Lake Erie commercial fisherman insisted on taking two of us to



Port Dover to express an opinion on fish being caught, insisting that the information might be worth thousands of dollars to him.

Royal Ontario Museum of Archaeology - identification of bones from the Cahiague site, Medonte township, Simcoe County.

Ordinary citizens want identification and information about unusual fish taken while fishing, found at the bottom of a well, taken from the stomachs of fish caught or found in a field some distance from water.

Housewives want identification and information on eradication of insects found in the home, in food material, etc. etc.

Bones of a wide variety, usually of domestic animals, found by citizens are sent for identification, usually in the belief that they are of pre-historic origin. Those identified during the past year have been of pig, domestic cattle, dog, rat, porcupine, bat and shrew.

Bird specimens have been identified during the past year for A. A. Wood, Chatham; a student from Saskatchewan, and a Manitoba naturalist. In addition many enquiries, made by persons calling at the Museum and by telephone and letters, involved the identification of birds from descriptions.

Snails and other shells both marine and freshwater have been identified for Monroe Landon, Simcoe; Stuart Thompson, Toronto; Dr. Solman of National Parks Bureau; Montreal Botanic Gardens; a graduate student from British Columbia; Prince of Wales College, P.E.I.

Spiders were identified for Entomological Service, Ottawa and Provincial Museum of British Columbia.

INFORMATION of many kinds about a wide variety of animals is supplied on request to students, naturalists, reporters, authors and ordinary citizens.

Sample requests under this heading received recently are as follows:

Daily Star writer, - background information for a series of articles  
on the fisheries of Ontario  
- danger of dumping poison gas in the ocean  
- headless chickens  
- duck decoys

Writer in Rod and Gun in Canada, - list of record game fish for Canada  
- salmon in Lake Ontario  
- game fish along Alaska highway

Department of Lands and Forests officer, - Role of birds in seed  
distribution.

Ducks Unlimited, - information on black duck in Ontario.

Maclean Magazine writer, - hibernation

Publisher of Canadian Nature, - conservation of animal life.





Philadelphia man, - most westerly occurrence of Atlantic salmon in St. Lawrence.

Graduate student, - Ornithological information

Stouffville Tribune, - information for article on skunk

Toronto artist, - pack rats and deer fawns as basis for illustrations for magazine stories.

National Audubon Society research scientist, - information on whooping crane

Veterinary students, - information on foxes for use in thesis

School children often write for pictures and information about birds, mammals, etc. etc.

ILLUSTRATIONS for articles and books are commonly sought. Only a few can be supplied.

Sample requests - F. C. Whitehouse, author of Sport Fishes of Western Canada wanted pictures to illustrate his book.

A Los Angeles man wanted pictures of 3 Canadian trout, 2 of them quite rare.

National Film Board, Ottawa, - photographed many of our fish casts in preparation of a film strip for the Dept. of Fisheries. Much assistance had to be given them.

Saturday Night writer was helped in getting pictures in gallery to illustrate article.

Department of Lands and Forests, - drawing of burbot to illustrate publicity article.

SPECIMENS were loaned for school and University classes and to naturalists; to Mr. Ghent, X-ray Department, Toronto General Hospital; to wood carvers; to Dr. Moses, Faculty of Dentistry, University of Toronto, skulls for use in research.

LECTURES were given to forty classes, clubs and other groups, totalling 1470 persons.

#### ACCESSIONS

The number of specimens added to the various groups during the past year is as follows:

	<u>Donated</u>	<u>Collected</u>	<u>Purchased</u>	<u>Exchanged</u>	<u>Total</u>
Mammals	116	115	20	0	251
Birds	510	77	878	77	1542
Nests and sets of					
eggs	92	5	1	0	98
Reptiles	42	7	0	0	49
Amphibians	9	0	2	0	11



	<u>Donated</u>	<u>Collected</u>	<u>Purchased</u>	<u>Exchanged</u>	<u>Total</u>
Fish	102	490	0	0	592
Insects	190	4614	0	0	4804
Spiders	225	1500	0	0	1725
Molluscs	620	0	3775	284	4679
Other invertebrates	8	0	0	0	8

DONATIONS of interest or importance were received from the following:-

Mr. Paul Hahn - his 60th passenger pigeon  
 Mr. O. D. Boggs - 255 bird skins, 54 sets of eggs, (16 with nests) from Columbia.  
     This makes nearly 1000 South American birds donated by Mr. Boggs.  
 Dr. V. Solman - National Parks Bureau, Ottawa - 40 lake herrings from Banff.  
 H. R. Conn, 254 Bay St., Ottawa - otter and beaver, both in the flesh.  
 Edward B. Taylor, Brandywine Blvd. and Duncan Rd., Washington, Del. - 26 $\frac{1}{2}$  lb.  
     maskinonge.  
 Rev. H. B. Herrington, Newburgh, Ontario - 25 spiders and 39 lots of molluscs.  
 Mr. A. L. Reading, King St. W., Toronto - 29 species of molluscs from British  
     Guiana.  
 Dr. L. S. Russell, Royal Ontario Museum of Palaeontology - 171 lots of molluscs from  
     Alberta.  
 Ontario Department of Lands and Forests - marten, weasel and mink  
 Mrs. Joy Osterdahl, Highland Creek, Ont., - Dachshund  
 Ken T. Thorburn, Dominion Range Experimental Station, Manyberries, Alberta - 10  
     horned lizards and 6 prairie rattle snakes from Alberta.  
 R. H. Burns, 277 Pim St., Sault Ste. Marie, Ont. - wood tortoise from Algoma  
     district.

PURCHASED SPECIMENS included:-

3775 lots of Pacific marine molluscs - a fauna previously poorly represented in our  
 collection, from Mrs. V. G. Moleworth, Victoria, B.C.  
 537 birds and 20 mammals from Ungava and West coast of Hudson Bay from Lt. T. H.  
 Manning.  
 126 Saskatchewan birds - F. Mowat.  
 68 birds from Ungava and Churchill, Man., from D. F. Coates, and 4 mammals.  
 143 birds, an early collection made in the vicinity of Cobourg by Herbert Skill  
 from Franklin Loy, Cobourg, Ontario.

COLLECTING by staff members has been greatly reduced, owing to the small sum  
 available for field work.

Mr. Hope, while employed on field work in Algonquin Park by the Ontario  
 Department of Lands and Forests, collected:  
     57 birds, including 2 new records for the Park and a number of new  
     plumage stages; also the first set of Evening Grosbeak's  
     eggs to be taken in Ontario.  
     86 mammals were also collected.





Randolph L. Peterson, who was supported by the Carling Conservation Club Fund collected 30 mammals for the Museum during the summer.

Dr. F. Urquhart, while supported by the Ontario Research Foundation on summer field work, collected 4426 insects.

W. B. Scott, while employed by the Ontario Department of Lands and Forests, collected 490 fish in Lake Erie.

IMPORTANT EXCHANGES of material with other Museums brought us 134 lots of molluscs from the Museum of Comparative Zoology and 150 from the Museum of Zoology, University of Michigan, and 63 bird skins from Madras, through exchange with Flight-Lieutenant H. G. Lumsden, R. A. F.

#### LIBRARY

	<u>Donated</u>	<u>Purchased</u>	<u>Total</u>
Bound volumes	33	35	68
Pamphlets	157	0	157
Unbound periodicals	1226	44	1270

Recently the two island stacks in the centre of the library stackroom (Room 310) were torn down and completely rebuilt.

In June stock was taken of the books and periodicals in the stackroom and of those in the library reading room.

In September, a list was compiled of some of the duplicate publications being offered for sale. This is the first of a series and another is now in preparation.

#### ROUTINE WORK WITH COLLECTIONS


The scientific collections of many thousands of mammals, birds, reptiles, amphibians, fishes, insects, molluscs, etc., have been cared for. This has involved fumigating mammals, birds and insects and going over the specimens preserved in alcohol to see that they are not being injured through drying up.

Specimens prepared for storage, included in the collection and catalogued were as follows:

<u>Division</u>	<u>Specimens prepared for storage</u>	<u>Specimens labelled and catalogued,</u>
Mammals	10	0
Birds	287 plus 15 skeletons	625
Reptiles and amphibians	29	29
Fishes	274	274
Insects	6866	6866
Spiders	153	153
Molluscs	3056	3056

#### FIELD WORK

Several members of the Museum staff carried out field investigations during the summer, under the auspices of other organizations. The reasons for this



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rather unusual arrangement were:

- (1) The Museum had practically no funds of its own for field work.
- (2) Shortage of trained personnel to direct or carry on field work needed by the organizations concerned made it desirable for our staff to assist.
- (3) Payment for this work enabled some of our staff to supplement their otherwise inadequate salaries.
- (4) While the Museum was not having essentially Museum work carried out, we did obtain considerable numbers of specimens as a result of the summer projects in which our staff members cooperated.

Dr. Oughton again assisted in the fisheries surveys of Great Slave Lake being carried on by the Fisheries Research Board of Canada. Collections of molluscs, fishes and other material have come to our Museum as a result of this cooperation.

Dr. Urquhart took part in a study of mosquitoes under the auspices of the Ontario Research Foundation. Besides contributing to our knowledge of mosquitoes, Dr. Urquhart obtained 4426 specimens of insects, including mosquitoes for our collection.

Mr. C. E. Hope assisted the Ontario Department of Lands and Forests with the wildlife research programme which they are developing in Algonquin Park. In addition to directing the work of 10 students, Mr. Hope continued a study of the relation of birds to certain forest types. Specimens were added to the Museum's collections as already indicated.

Mr. Downing, assisted by Mr. Prince and Mr. Cross, continued the study of mouse populations in Algonquin Park. This is the eighth year in which this study has been carried on and it has now reached the stage where it must either be dropped as a Museum project, or continued on a different basis.

The role of mice and other small mammals in the life of the forest is not understood, although enough is known to indicate that they are important (1) as food for some fur bearers, (2) as predators on some forest insects and (3) possibly as eaters of certain tree seeds and/or seedlings. Work similar to that which has been carried on by Mr. Downing has been under way in the United States. The Museum's work in Algonquin Park has contributed to our knowledge of the population of animals whose relations to the forest must be studied as soon as arrangements for it can be made.

Mr. Snyder continued the ecological studies begun 2 years ago on a small research area in King Township.

Mr. Shortt was given a month's leave of absence in addition to his month's holiday to enable him to study wildlife in Mexico. The Museum is to receive a collection of Mexican birds made by Mr. Shortt during his trip.

Mr. Baillie, during two weeks of his vacation, acted as bird instructor at the Federation of Ontario Naturalists summer nature school. He also made a special study and prepared a report relative to an economic problem concerning cormorants and fisheries for the Department of Lands and Forests.





Professor Dymond in July continued the development of a nature programme in Algonquin Park for the Ontario Department of Lands and Forests. With the help of two student assistants he expanded the work begun two years ago by opening a small temporary museum and by instituting weekly evening lectures.

In August, he represented the Federal Department of Fisheries at the meeting of the International Council for the Exploration of the Sea, in Stockholm. While in Sweden, he visited the Swedish National Museum of Natural History and the Goteborg Museum of Natural History. In London, he also visited the British Museum (Natural History).

#### CARLING CONSERVATION CLUB FUND

Under the Carling Conservation Club Fund, a sum of money given the Museum for wildlife research by the Carling Conservation Club, Messrs. R. L. Peterson and G. S. Cameron were employed on field work.

Mr. Peterson, a graduate of the Agricultural and Mechanical Arts College of Texas has been employed to carry out an ecological study of the moose. Mr. Peterson has had a thorough training in ecology and during the summer made observations on the habitats frequented, foods eaten, and movements of the moose. Most of the observations were carried out in the Pine River area of Algonquin Park, but some time was spent in the Chapleau Game Preserve.

Gordon S. Cameron, a first year student in Honour Science, was employed to begin a study of the maskinonge in northwestern Ontario, where this fine game fish is still quite common. Most of the time was spent on Little Vermillion Lake near Sioux Lookout, where last year a new species, popularly known as the True Tiger Muskie (Esox amentus) was described. Mr. Cameron has found that this variant from the common type is distinct in some respects although the full meaning of the differences shown are not yet clear. He has also found an intestinal condition which develops in midsummer, which appears to interfere with the feeding of the fish at that season. Observations on habitat, food, and abundance were also made. Short trips were made to other maskinonge waters in northwestern Ontario, including the Lake of the Woods from which he secured a specimen for the Museum's exhibition collection.

Mr. E. B. S. Logier visited Little Vermillion Lake for a short time and got colour sketches of maskinonge for use in illustrating publications about the species in the future.

#### PUBLICATIONS

##### Contribution No. 27

The article by L. L. Snyder and T. M. Shortt on "Variation in Bonasa umbellus with particular reference to the species in Canada east of the Rockies", which was published in the Canadian Journal of Research, has been reprinted as Contribution No. 27 of the Royal Ontario Museum of Zoology.

##### Jas. L. Baillie, Jr.

Conservation and Canada's migratory water-fowl - Carling Conservation Club  
booklet : 8 pp. November, 1945.



Jas. L. Baillie, Jr. (cont.)

Conservation and winter help for our birds - Carling Conservation Club booklet : 8 pp. February, 1946.

The redhead as a breeding bird of Michigan and Ontario - Wilson Bulletin 58: 111-2, June, 1946.

Conservation and our tourist industry - Carling Conservation Club booklet : 8 pp. September, 1946.

S. C. Downing

The history of the gray fox in Ontario - Can. Field-Nat. 60:45-46, 1946.

Conservation and Canada's fur-bearing animals - Carling Conservation Club booklet : 8 pp. 1946.

J. R. Dymond

Wildlife management - Conservation Illustrated pp. 79-91

Fresh and salt water fish - Conservation Illustrated pp. 93-97

J. R. Dymond with A. F. Coventry

Soil and wise land use - Conservation Illustrated pp. 23-36

Water- a national treasure - Conservation Illustrated pp. 43-49

C. E. Hope

Bird population studies in Algonquin Park 1945 - Research Report No. 9 Apr. 1946

Wildlife investigations, Algonquin Park 1945 - mimeographed (23 pages)

Snyder, L. L.

Birds on a northern lake - Canadian Nature 8: 136-37, 1946

Snyder, L.L. and T. M. Shortt

Variation in Bonasa umbellus, with particular reference to the species in Canada east of the Rockies - Can. Jour. Res. 24:118-33, 1946

F. A. Urquhart

Hummingbird moths - Canadian Nature 7:62-63, 1945

Giant silkworm moths - Canadian Nature 8:64-65, 1946.

PUBLICATIONS SOLD

Contributions	85
Handbooks	38
Leaflets	45
Check list of birds	2709

NUMBER OF PIECES MAILED

Letters	2714	Parcels	118
Publications	186	Questionnaires	1040
Postcards	47	Miscellaneous	48

